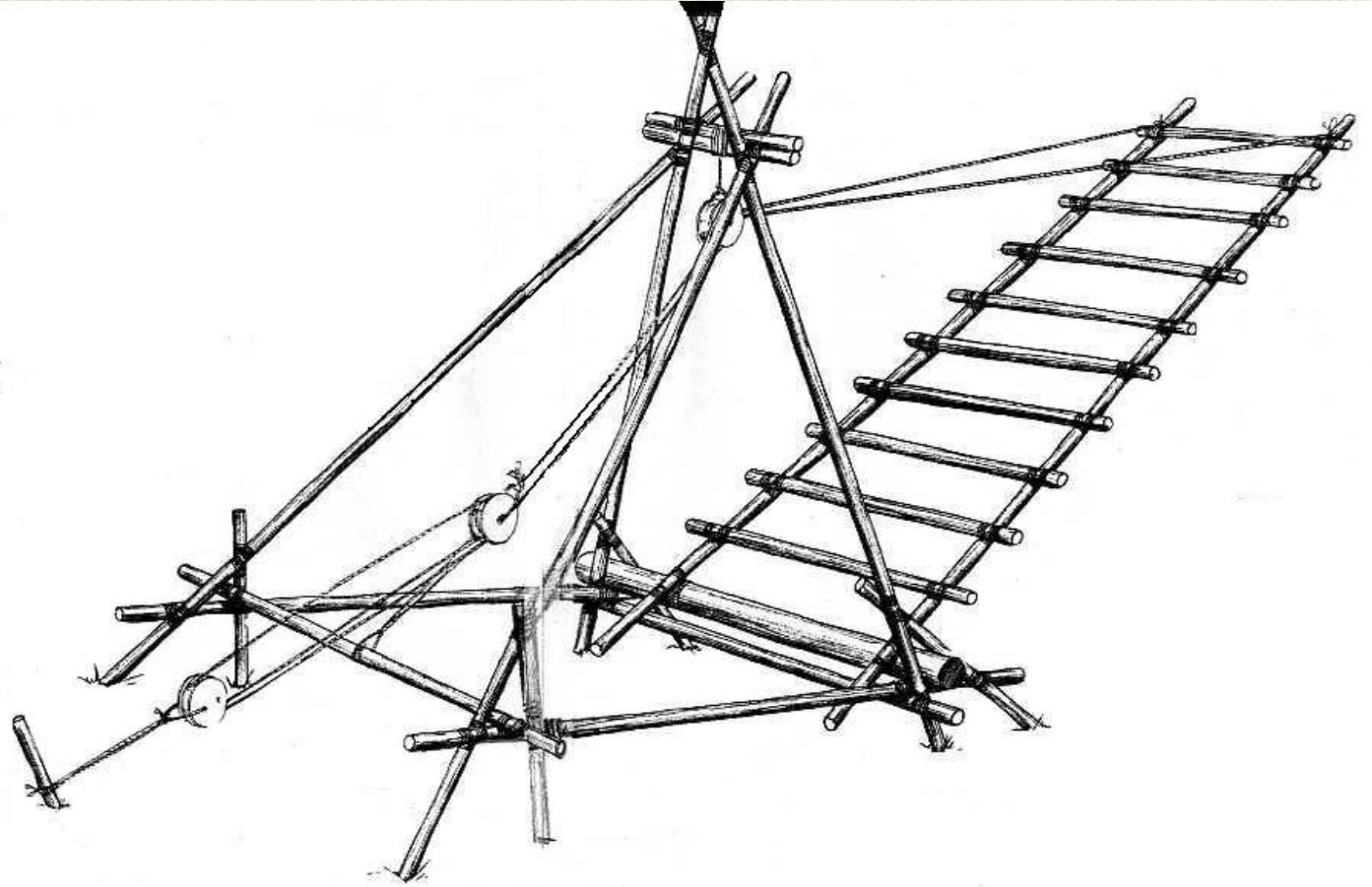


pioneering project 4



DRAWBRIDGE



Equipment

- 4 x 5m poles
- 6 x 4m poles
- 2 x 2m poles
- 2 x 1.5m poles
- 7 x 1.2m poles
- 6 x 1m poles
- 1 log approx. 2m long
- Lashing lengths
- Pulleys – 1 single and 2 double (at least one with a hook)
- Light line
- 1 x 15m rope and 1 x 40m rope to fit pulleys
- Poles to form a temporary ladder – 3 x 2m
- Pegs, mallet, 1 picket and a maul or sledgehammer

Method

1. Prepare an A frame using 2 x 4m poles and 1 x 2m pole
2. 2 x 5m poles should be lashed approx. 1m below the sheer lashing at the apex of the A frame. These lashings

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3. should be slightly loose as, when the A frame is standing upright, the poles need to slope down to the ground.
4. 1 of the 1m poles is then lashed to the 5m poles just above the lashing joining them to the A frame and a second 1m pole lashed to the A frame as close to the previous 1m pole as possible. Take care to allow enough space for the 5m poles to move.
5. Tie guy ropes to the top of the A frame.
6. Stand the A frame upright and support it by resting the 5m poles on the ground. Guy in place.
7. Lash 2 x 4m poles on top of the lower bar of the A frame, in the corners. These poles should stick out beyond the A frame by about 1m. Lash the other ends to the 2 x 5m poles.
8. Join these 2 x 4m poles with 1 x 2m pole. This pole should be inside the triangle formed at the side by the A frame, 1 x 4m pole and the sloping 5m pole.
9. At the corner of the side of the frame, stand a 1.2m pole on the ground. It should be close enough to the corner that it can be lashed to both the bottom pole and the sloping one. This will provide some bracing for the frame and also be another point of contact with the ground.
10. Repeat on the other side of the frame.
11. Prepare a tapering ladder using 2 x 4m poles and the remaining 1.5m and 1.2m poles. At the wider end, the first rung should be approx. 1m from the ends of the 4m poles.
12. With the rungs on the top of the ladder, lash the log under the wider end of the ladder between the first rung and the ends of the 4m poles.
13. Rest the log on the ends of the 4m poles where they stick out beyond the A frame, close to the A frame but allowing sufficient space for the log to pivot as the gate is opened. Lash a 1.5m pole to the end of the 4m pole and the A frame to form a triangle to contain the end of the log. Repeat of the other side.
14. Lash 3 x 2m poles onto the A frame to form a temporary ladder and, using this, climb up to attach one of the double pulleys to the centre of both of the 1m poles lashed to the A frame.
15. Take the 15m rope and pass both ends through the suspended double pulley so that the resulting bight is facing away from the river/ravine. Tie of the ends of the rope to the far ends of the ladder.
16. Using a catspaw, attach the remaining double pulley (the one with the hook) to the bight in the 15m rope.
17. Mouse the hook.
18. Drive the picket in 8m behind the structure and attach the single pulley to it.
19. Use the 40m rope to reeve between the single and double pulleys in the usual way.